WASTEWATER PRICING AND FACILITIES IN GEORGIA

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Abstract. This paper will present the results of the 1998 survey of the 269 public wastewater facilities in Georgia. The survey was returned by 53% of the wastewater entities in the state. The paper will present information on wastewater rates and rate structures, capacity, connections, types of treatment and disposal, excess use charges, and other facility characteristics. The goal of the paper is to provide comparative data on the wastewater industry in Georgia.

Introduction

This report represents the results of a survey of Georgia's public wastewater systems. A questionnaire was mailed to all public wastewater systems in Georgia in February of 1998, with follow-ups in March and May.

The population of this survey was taken from the permit list of the Georgia Environmental Protection Division (EPD). The EPD's list included 404 total permits, assigned to 269 public entities. Of these 269, 20 entities were not included in the results. These include Georgia Department of Human Resources hospitals, Department of Industry and Trade Visitor Centers, State Parks, jails, rest stops, State Patrol posts and a Department of Energy facility. Of the remaining 249 wastewater entities, 133 surveys were returned, accounting for 53% of public wastewater systems in Georgia. Of these, 122 were usable as survey results.

Characteristics of Survey Respondents

For the 123 public wastewater systems that completed the survey, 44% characterized themselves as urban, 41% as rural, 15% as suburban. The average service area was 24 square miles, ranging up to 480 square miles. City or municipality ownership accounted for 93% of the respondents. Three percent of systems were owned by a public entity but operated by a private firm.

Besides wastewater, 80% of the systems also served retail water customers, 17% had a storm water service and 3% had a water reuse facility. The average size of the wastewater systems was 4,131 connections, ranging from 31 to 132,480. The average system treated 764 million gallons of wastewater in 1997. The smallest system treated 1.1 million gallons and the largest 12.9 billion gallons for the entire year. Revenues to the respondents ranged from $9,265 for 1997 to $54.8 million with a system average of $1.53 million.

Basis for Rates

Nearly nine out of 10 systems base the charge for wastewater on water consumption. As shown in Table 1, 86% of respondent systems base wastewater charges on water use, with the majority using 100% of water use as wastewater consumption. In effect, most systems double the water bill to achieve the wastewater charge. For those not basing wastewater charges on water consumption, most charge a flat fee.

Table 1. Wastewater Charge Based on Percentage of Water Usage

Percent	Number of Systems
33	1
50	6
54	1
64	1
75	3
80	7
85	1
90	2
100	82
125	1

Rate Structure

Most public wastewater systems in Georgia use a uniform rate structure to charge their customers. As shown in Figure 1, 69% use a uniform rate. Of those, 9% combine a uniform rate with an excess or seasonal charge. Only 7% use a decreasing block rate and 7% use a flat charge while 5% of the systems employ an increasing block. Of those listed as other, all have rates based on water use but give no indication in the survey of the structure. The rate structures for non-residential customer were similar.

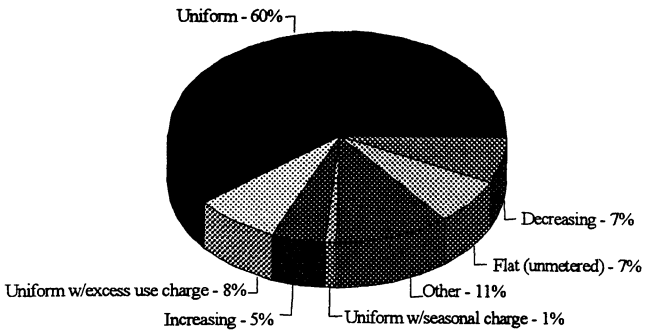

Figure 1. 1998 wastewater rate structures.

Other Charges

For those systems employing excess use charges, or surcharges, most apply to BOD or suspended solids (Table 2). Systems also charge for nitrogen, phosphorous, and other contaminants. The "other" category consists mostly of oil and grease with one system charging for metals and one for PH test.

Besides residential and non-residential customers, 24% of the systems apply separate rates to other customer classes such as multi-family residential and large industrial. Also, 51% of the systems charge a separate rate to customers being served outside their jurisdiction. Twenty-three percent of the systems charge a system development or impact fee. Further, 14% have special contract rates with individual large-volume customers.

Billing

Since most wastewater systems are part of a combined water/wastewater department, most bill wastewater service with water. For the respondent systems, 74% bill combined water/wastewater while 4% send out a separate bill for wastewater service only. Of the remaining 22% most (69) combine water/wastewater with a refuse and/or recycling charge. In addition, 27 systems bill gas charges along with wastewater, 20 bill electric, six bill cable and one bills recreation. Wastewater service is primarily billed monthly by 97% of the systems — the rest bill bi-monthly.

Table 2. Excess Use Rates Applied For:

	Number of Systems
BOD	32
Suspended solids	28
Nitrogen	13
Phosphorous	6
Other	10

Wastewater Charges

For the 122 public wastewater systems that completed the survey, the average wastewater bill for 10,000 gallons to a residential customer was $18.89 per month. The range was from zero to $49.44. For non-residential customers, the average charge for 10,000 gallons of treated wastewater was $22.59, ranging from zero to $72.15.

For the respondents, the average bill for wastewater was $12.84 per month and the average usage was 6,464. The range of average bills was from zero to $26.78 and the range of wastewater consumption (water consumption) went from 2,000 gallons to 15,000 gallons.

The average bill for wastewater in the highest use month of 1997 was $27.77, ranging from $4.50 to $319.00 on average gallons of 11,253, ranging up to 50,000.

Facility Characteristics

For the 123 respondents, the average total permit capacity was 3.23 million gallons per day with the largest system having a permitted capacity of 56 mgd. Seventy-six percent of the respondents operated one wastewater facility, 17% operated two and 7% operated between three and seven facilities. Average daily flow was 2.11 mgd, ranging from 3,000 gallons to 35.4 mgd.

Tables 3 through 5 show the types of treatment, discharge and sludge removal facilities of the respondents systems. Activated sludge is the dominant treatment facility while surface water discharge is used by almost all of the systems. Sludge is mostly transferred to a landfill site, although 26% of the systems use some kind of land application, compost or fertilizer method.

Tables 3/4/5. Type of Treatment Facility, Discharge, and Sludge Handling Method

Type of Treatment Facility:	Percent
Activated sludge	50
Oxidation ponds	33
Trickling filtration	6
Other	11
Type of Discharge:	**Percent**
Surface water discharge	87
Land application	9
Rapid filtration	2
Other	3
Sludge Handled by:	**Percent**
Landfill	64
Beneficial use	26
Ponds	10